AGENDA

SPECIAL MEETING
COMMITTEE ON COMMUNITY IMPROVEMENT

July 18, 2006 **5:30 PM**
Aldermen Garrity, O'Neil, **Aldermanic Chambers**
Osborne, Gatsas, Duval **City Hall (3rd Floor)**

1. Chairman Garrity calls the meeting to order.

2. The Clerk calls the roll.

TABLED ITEM

A motion is in order to remove the following item from the table for discussion.

3. On May 3, 2005 the Board of Mayor and Aldermen voted to retain and repair the Black Brook/Maxwell Pond Stream Restoration Proposal and referred to the Committee on CIP for funding.
(Tabled 09/13/2005 pending report from Planning Director; retabled on 12/05/2005 and referred to 2007 CIP budget.)

4. If there is no further business, a motion is in order to adjourn.

BLACK BROOK/MAXWELL POND

March 2004	Original submittal received
2004	Appeared on various Lands & Buildings Committee agendas
January 20, 2005	Public hearing held by State
April 18, 2005	Committee on Lands & Buildings Action Taken: Referred to BMA for presentation
May 3, 2005	Presentation made to BMA by Steve Landry (NHDES) Action Taken: retain and repair dam and that it be referred to CIP for funding issues.
June 7, 2005	Committee on CIP Action Taken: referred to CIP staff to report back in September.
September 13, 2005	Committee on CIP Action Taken: $70,00-$75,000 to repair dam…look at bond balances…wait until FY2007 CIP program. Tabled pending report from Planning Director.
December 5, 2005	Committee on CIP Action Taken: Planning Director advised that State funds for the removal of the dam not available over the next 10 months as funds were reallocated to another project…could apply again next fall (2006) to the state for demolition of the dam. Quick patch roughly $60,000…completely restore which would require dredging approximately $1 million. Retabled and referred to 2007 CIP budget.
March 7, 2006	Committee on CIP Action taken: remained tabled.

CITY OF MANCHESTER
Office of the City Clerk

6/7/05 - Ref. to CIP Staff for report back at Sept. mtg. re: funding

Leo R. Bernier
City Clerk

Carol A. Johnson
Deputy City Clerk

Paula L-Kang
Deputy Clerk
Administrative Services

Matthew Normand
Deputy Clerk
Licensing & Facilities

Patricia Piecuch
Deputy Clerk
Financial Administration

9/13/05 Tabled 10/11/05 12/15/05 - refer to FY07 CIP

MEMORANDUM

To: Committee on Community Improvement

From: Leo R. Bernier
City Clerk

Date: May 6, 2005

Re: Black Brook/Maxwell Pond

Please be advised that on May 3, 2005, the Board of Mayor and Aldermen voted to retain and repair the dam and refer the report of the Committee on Lands and Buildings to the Committee on Community Improvement.

Enclosure

Enclosed is a copy of the report reflecting actions taken.

To the Board of Mayor and Aldermen of the City of Manchester:

The Committee on Lands and Buildings respectfully recommends, after due and careful consideration, that the Black Brook/Maxwell Pond Stream Restoration Proposal be referred to the full Board of Mayor and Aldermen for presentation.

May 3, 2005.
In Board of Mayor and Aldermen.

On motion of Alderman Forest, duly seconded by Alderman Porter, it was voted to retain and repair the dam.

On motion of Alderman DeVries, duly seconded by Alderman Smith, it was voted to refer to the Committee on Community Improvement.

City Clerk

Respectfully submitted,

Clerk of Committee

8/10/04 - tabled
11-15-2004 - Go forward + have PH + inform Committee when PH will be held.
1/5/05 - removed tabled

Manchester Urban Ponds Restoration Program

One City Hall Plaza, Manchester NH 03101 (603) 624-6450 www.manchester.nh.gov/UrbanPonds

August 6, 2004

Lands & Buildings Committee
Honorable Board of Mayor and Aldermen
One City Hall Plaza
Manchester, NH 03101

Re: Black Brook/Maxwell Pond Stream Restoration Proposal

Honorable Committee Members:

The Manchester Urban Ponds Restoration Program (UPRP) was created in 2000 in an attempt to restore the city's urban ponds to their historic uses (such as boating, fishing, or swimming). The program attempts to promote public awareness, education and stewardship, reduce pollutant loading to improve water quality, maintain or enhance biological diversity, and provide improved recreational uses at each pond. One of the ponds in the program is Maxwell Pond.

Maxwell Pond has existed since 1900 when a dam was erected on Black Brook for the purpose of ice harvesting. Since that time the pond has been an ecosystem in need of restoration, since it has seen increased impacts from surrounding and upstream land uses over the last 50 years.

In 2001, I initiated an advisory committee comprised of environmental professionals to assess possible options for the restoration of the Maxwell Pond/Black Brook corridor. The initial discussions included dam removal as part of a larger Black Brook Corridor Restoration Project. There are many justifiable reasons for this option. First, the dam (currently in disrepair) no longer serves its original purpose, and is costly to maintain on a yearly basis. Second, the pond no longer resembles what it once was, and is no longer being used as a swimming area. Third, restoring Black Brook would enhance biological diversity and open up approximately 6 miles of unimpeded anadromous fish habitat from the Merrimack River upstream to Black Brook. This type of project, in the true spirit of restoration, certainly fits the scope and intent of the Manchester Urban Ponds Restoration Program.

Those on the advisory committee include representatives from the NH Department of Environmental Services, the NH Fish & Game Department, Trout Unlimited, the National Park Service, the Manchester Parks, Recreation & Cemetery Department, the Manchester Conservation Commission, and others. Each entity has been crucial in assisting the Urban Ponds Restoration Program with the design of a feasibility study, pre-restoration monitoring, and the likelihood of success of dam removal and habitat restoration at this site.

Through many hours of fieldwork and meetings, we have completed an exhaustive study of the impounded area to better understand the impacts of dam removal at this site. Since this is a City owned dam, the City holds the final determination of whether to move forward with the restoration of Black Brook by removing the impoundment. Considering such factors as timing, funding, dam maintenance, and habitat benefit, this is a rare opportunity for Manchester to restore at least some of what has been lost over the years.

In this period of rising environmental awareness, I ask that the Committee support this Urban Ponds Restoration Program initiative for the good of Manchester.

Thank you for your consideration.

Respectfully submitted,

Art Grindle
Urban Ponds Restoration Program Coordinator

The State of New Hampshire
Department of Environmental Services

Michael P. Nolin
Commissioner

March 15, 2004

Board of Mayor and Aldermen, Committee on Lands and Buildings
City of Manchester
1 City Hall Plaza
Manchester, NH 03101

Dear Committee Members:

The Black Brook Advisory Committee (BBAC) was created in 2002 in order to investigate the feasibility and scope of stream restoration activities along the Black Brook corridor. The BBAC is comprised of representatives from The City of Manchester Conservation Commission and Parks and Recreation Department, Trout Unlimited, the National Park Service and the Department of Environmental Services. Several collaborative efforts are currently underway that will provide detailed recommendations and restoration strategies geared toward returning Black Brook to a more natural condition and function.

One of the major restoration initiatives identified by the BBAC is to investigate the potential removal of the dam on Maxwell Pond. The City of Manchester is currently faced with substantial financial obligations to repair and maintain the dam in order to maintain safety requirements and annual inspection fees etc. The City of Manchester wouldn't have to contribute any financial resources to a restoration project involving dam removal at Maxwell Pond.

The Black Brook Advisory Committee would like to request that a special meeting be convened by the Committee on Lands and Buildings to receive an informational presentation on the proposed Black Brook restoration efforts and specifically, the potential removal of the Maxwell Pond Dam. The presentation will focus upon restoration efforts, predicted benefits, financial incentives and the abundance of funding opportunities currently devoted to this project. Approximately 45 minutes would be required for the presentation and question and answer period to follow. Ultimately, we are seeking the approval of the Committee on Buildings and Lands to move forward with this effort and to provide a positive recommendation to the Board of Mayor and Alderman. Convening this proposed meeting by the end of April would be greatly appreciated as several of our funding sources are time sensitive. Please contact either of us with a proposed date and time or if you would like to discuss this request further. Thank you.

Sincerely,

Stephen C. Landry
NHDES, Merrimack Watershed Supervisor
(603) 271-2969

Jennifer Drociak
Manchester Conservation Commission
(603) 559-0028

MAXWELL POND DAM REMOVAL: RESTORATION OF BLACK BROOK IS FEASIBLE

HISTORY OF MAXWELL POND

Maxwell Pond was created by the installation of a dam on Black Brook in 1900. The pond was reportedly named for A.H. Maxwell, who owned the Manchester Coal & Ice Company at the time when ice was harvested there. Ice harvesting took place in the 1930's and '40's, when Maxwell Pond was considered the best source in Manchester for pure ice. The company was located upstream and would keep the ice cold with hay-bales and sell it year round.

Until the late 1950's, Maxwell Pond was a popular for swimming, picnicking, and fishing in the summer. In the winter months the pond provided a spot for skating, bonfires and hockey games. It was even considered for a secondary municipal water source for the City of Manchester, but the idea was apparently abandoned sometime in the 1960's. In the late 1950's and early 1960's Maxwell Pond began to change when a cement company located upstream began impacting Black Brook by washing sediment into the streambed and impoundment.

WHY REMOVE DAMS?

There are more than 4,800 active and inactive dams in the State of New Hampshire. Many of these dams were built during the Industrial Revolution in the 19th and early 20th centuries, and they played central roles in New Hampshire's economic and societal growth during that period. But as technological and societal needs have changed, so too has the need for some dams.

Many New Hampshire dams and their impoundments enable and enhance values recreational uses, such as boating, fishing, and swimming. A smaller number of New Hampshire's dams provide important services such as water supply and flood control. But some dams, particularly those that are old, unsafe and uneconomical, may be good candidates to consider for removal.

BENEFITS OF SELECTIVE DAM REMOVAL

- Elimination of a public safety hazard.
- Cost savings to taxpayers and dam owners.
- Improvement to water quality.
- Elimination of barriers to fish and other aquatic species.
- Restoration of river habitats.
- Creation of new, river-based recreational opportunities.

Dams were historically built with little, if any, consideration to their impact on river systems. In the last several decades, resource managers have learned that dams cause environmental damage, that free-flowing rivers play a vital role in ecosystem health, and the selective dam removal can be both efficient and effective.

Selective dam removal can eliminate a public safety hazard, relieve a dam owner's financial and legal burdens and restore a river to a healthier, free-flowing condition. Consequently, some dam owners are taking a second look at their dams.

WHY REMOVE MAXWELL POND DAM?

Over the last 40-50 years, the community has not been able to swim in Maxwell Pond due to increases in sediment load from upstream sites over time. Today, the pond (which had a maximum depth of 8 feet in 1954) has a maximum depth of just 4 feet. Clearly the land uses upstream have had an impact on Maxwell Pond and historical activities have not taken place at the pond in many decades.

The possibility of restoring Black Brook by removing the Maxwell Pond dam came about as one of several corridor-wide efforts to restore Black Brook. These supplemental projects include riparian/wetland work upstream from Maxwell Pond near the City's transfer station, and brook restoration planning further upstream near Wakefield Materials.

WHAT ARE THE FACTORS OF DAM REMOVAL?

The process of selective dam removal looks at several factors such as possible wetland impacts, fish and wildlife impacts, social impacts, water quality and quantity impacts, historical resource impacts, sedimentation impacts, floodplain impacts,

and aesthetic impacts. It is the **environmental issues** that often trigger consideration for dam removal, but it is typically the **economic issues** that are the pivotal decision factor since it is, in many cases, less expensive to remove a dam than to maintain and repair it on a yearly basis. Engineering issues are typically straightforward, but it is the **social issues** that are the most challenging aspect.

ENVIRONMENTAL ISSUES

Dams can have many ecological impacts on rivers. They can block fish and other aquatic species from moving throughout a river system to access spawning sites and other critical habitats. Dams can hold back and cause buildup of sediment, woody debris, and other materials that would have naturally been disturbed throughout the river, playing important roles in providing nutrients and habitat for plants and animals downstream. Dams can increase water temperatures and decrease dissolved oxygen availability in impoundments, forcing many native river species out because they can't live under those conditions. Dams can also flood wetlands, floodplain forests and other ecosystems that naturally occur along the river's edge and serve valuable purposes.

The act of removing a dam may seem like a radical event to a river and the species that live in it, but rivers have proven themselves to be very resilient and able to "heal" quickly, based upon many dam removals that have taken place nationwide. Previously submerged lands revegetate rapidly, typically within a few weeks during the growing season. Fish populations and species diversity commonly increase in the restored stretch of the river within the first year after a dam is removed. Significant water quality improvements are often seen in a similarly short amount of time, depending upon conditions.

ECONOMIC ISSUES

The cost of keeping a dam safe, particularly when the dam is no longer serving an economic function, can represent a significant burden to the dam owner. Dam ownership requires ongoing financial responsibility. Sometimes the costs of operation and maintenance, liability protection, annual registration fees and other obligations of dam ownership may outweigh the benefits derived from the dam. Studies show that repairing a dam can often cost three times more than removing that dam. In addition, there are many potential funding sources. In this case, there are funding sources available to the City of Manchester from the Manchester Urban Ponds Restoration Program (UPRP), Department of Environmental Services (DES), NH Fish & Game Department (NHFG), Trout Unlimited (TU) among others. There would most likely be no cost to the City for dam removal, and all partners have been interested in seeking river restoration of this area.

SOCIAL ISSUES

Many people have concerns regarding dam removal, such as "will the river/waterbody disappear?" "will flooding occur?" or "will all the fish die?" Some concerns are based on lack of information while others are value-based. Many share both sets of concerns. However, proactive discussion rather than reactive decisions typically result in creative solutions.

WHAT PRE-RESTORATION WORK HAS BEEN COMPLETED?

During the Winter of 2001, DES and UPRP dug 310 holes in Maxwell Pond to examine sediment depth and locate the original brook channel. Sediment chemistry was then examined, and no contaminants were found. TU has been involved with surveying and aerial topographical mapping to examine channel morphological work. DES, NHFG, and TU also collected fish at four sites on Black Brook (two upstream from the impoundment and two downstream) to survey total population, weight, and lengths of the fish. At these same sites, macroinvertebrates (stream insects) were surveyed. Additional pre-restoration work (to be completed Summer 2003) will include a survey of fish inside the impoundment and additional channel cross-section work.

WHAT IS THE TIMEFRAME FOR POTENTIAL DAM REMOVAL AT MAXWELL POND?

FOR MORE INFORMATION

Contact the NH Department of Environmental Services, Water Division, Dam Bureau, River Restoration Coordinator at (603) 271-3406 or e-mail slindloff@des.state.nh.us. OR

The Manchester Urban Ponds Restoration Program at (603) 624-6450 or agrindle@ci.manchester.nh.us

Black Brook Dam - Manchester, NH

Annual Maintanance Costs Incurred by Parks, Recreation and Cemetery Department

City of Manchester - Maintenance and Associated Costs

Work Description	Frequency	Year Completed	Cost	Annual Cost
Annual Maintenance	Yearly	2002	$ 950.00	$ 950.00
Dam Inspection by NHDES	Yearly	2002	$ 300.00	$ 300.00
Emergency Action Plan (EAP)	5yrs.	1998	$ 14,200.00	$ 2,840.00
Repair & Improvements	15 yrs	1986	$ 20,741.60	$ 1,382.77
			Average Annual Costs	**$ 5,472.77**

October 21, 2003

Sally Fellows
Office of the City Clerk
One City Hall Plaza
Manchester, NH 03101

Re: Lands & Buildings Committee Meeting Agenda for December 16, 2003

Dear Ms. Fellows:

I am writing to request that the Black Brook Advisory Committee be placed on the Lands & Buildings Committee agenda for Tuesday December 16, 2003.

The Black Brook Advisory Committee includes members from the Manchester Conservation Commission, Parks & Recreation Department, Department of Environmental Services, and other organizations. Their focus has been on Maxwell Pond dam removal and Black Brook river restoration.

During this meeting the Black Brook Advisory Committee would like to discuss the feasibility of dam removal/river restoration, the alternative of dam repair, monetary costs associated with and ecological components of both options. The Black Brook Advisory Committee is ideally looking for an Aldermanic vote in favor of dam removal/river restoration and would be willing to give a second presentation to the Mayor and Board of Alderman afterwards, if necessary.

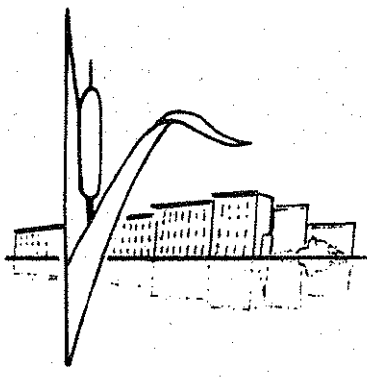
Please let me know if the Black Brook Advisory Committee will be on the Lands & Buildings Committee agenda for Tuesday December 16, but contacting me at 647-1826 or jen.drociak@nh.gov.

Thank you and I look forward to hearing from you.

Sincerely,

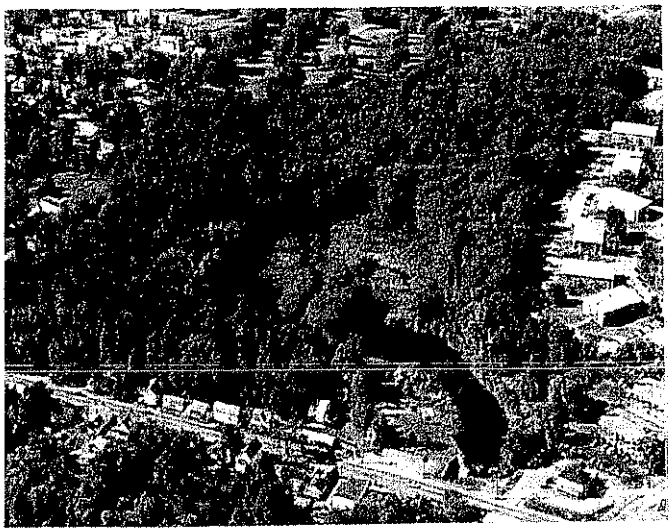
Jen Drociak

Jen Drociak
Manchester Conservation Commission



Mayor's Office, One City Hall Plaza, Manchester, NH 03101 (603) 624-6450

MANCHESTER
CONSERVATION
COMMISSION



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black_brook-22.jpg

black_brook-23.jpg

Black Brook Dam Removal
Manchester, NH
Cost Estimate

11/15/2004

I. LABOR (4 men crew)	Labor Cost	Duration (days)
Mobilization		3
Labor Cost - ($23.46/hr x 8 hrs/day x 4men x 3 days)	$2,252.16	
Site Preparation & Water Control		2
Labor Cost - ($23.46/hr x 8hrs/day x 4 men x 2 days)	$1,501.44	
Demolition and Debris Removal		10
Labor Cost - ($23.46/hr x 8 hrs/day x 4men x 10days)	$7,507.20	
Demobolization and Restoration		8
Labor Cost - ($23.46/hr x 8 hrs/day x 4 men x 8 day)	$6,005.76	
Total Labor Cost=	***$17,266.56***	
Total # of Days=		***23***

II. EQUIPMENT		
In-House Rental (See attached "Dam Project Equipment Rental sheet for details)	$4,652.00	$4,652.00
Rental - Excavator w/ Hammer (1 week @$3,500/wk)	$3,500.00	
Rental - Excavator w/ thumb (2 weeks @ $2,500/wk)	$3,000.00	
Total equipment cost =	***$11,152.00***	

III. MATERIALS	
Misc. - rip-rap, gravel, turbidity curtains, silt fence, etc.	$6,000.00
Total Materials Cost =	***$6,000.00***

Black Brook Dam Removal
Manchester, NH
Cost Estimate

11/15/2004

V. PLANNING & PROJECT OVERSIGHT

4 weeks @ $1,500 per week	$6,000.00
In-State Travel- 4 weeks @ 60mi/day, $.375/mi	$450.00
Total Engineering Cost =	***$6,450.00***

VIII. Summary

A. Labor	$17,266.56
B. Equipment	$11,152.00
C. Materials	$6,000.00
G. Planning & Project Oversight	$6,450.00
F. 20% contingencies	$8,173.71
Total Project Cost =	***$49,042.27***

Dam Project - Equipment Rental

Project Estimate

Dam Project: Black Brook Dam Removal ***Dam No.:*** PD 150.07

Equipment Item	Class	No. of Days	Daily Rate	No. of Hours	Hourly Rate	Total $$
Brush Hog - WOODS	N/A		$35.00		$0.00	$0.00
Brush Hog - JOHN DEERE	N/A		$35.00		$0.00	$0.00
Brush Hog - JOHN DEERE	N/A		$35.00		$0.00	$0.00
Compressor, Air (Le-Roi) (TR-552)	11001	14.00	$11.95	84.00	$2.22	$353.78
Crane, Drott (ES-131)	19009		$78.37		$5.55	$0.00
Crane, Quickway (ES-116)	19009		$78.37		$5.55	$0.00
Crane, Quickway (ES-118)	19009		$78.37		$5.55	$0.00
Dozer Backhoe TD-7	49003		$31.78		$5.00	$0.00
EXCAVATOR - CASE 9010D	N/A		$206.40		$25.80	$0.00
Jackhammer	N/A	5.00	$24.00		N/A	$120.00
Loader, Michigan (ES-135)	33002		$52.85		$4.00	$0.00
Loader, Michigan (ES-??)	33002		$52.85		$4.00	$0.00
Mower, Slope Master	49001		$9.08		$1.27	$0.00
Mowers, Ferris	N/A		$18.00		$2.25	$0.00
Mowers, Lawn (Small)	N/A		$4.50		$1.50	$0.00
Saw, Hydraulic Concrete (18hp)	N/A	5.00	$30.00	8.00	$28.50	$454.00
Saw, Brush	N/A		$14.25		$1.90	$0.00
Saw, Chain (16"-19" blade)	N/A		$14.25		$1.90	$0.00
Stomper, Stone/Compaction	N/A		$27.50		$4.63	$0.00
Tractor, Ford	49001		$9.08		$1.27	$0.00
Tractor, John Deere (no backhoe)	49001		$9.08		$1.27	$0.00
Tractor, John Deere w/backhoe	49003		$31.78		$5.00	$0.00
Trailer, 21-TON Rogers (TR-626)	53002	4.00	$12.17	20.00	$2.43	$97.28
Trailer, Low-Bed 12-Ton (TR-550)	53002		$12.17		$2.43	$0.00
Trailer, Hudson (TR-547)	53002		$12.17		$2.43	$0.00
Trailer, Pequea (TR-670)	53002		$12.17		$2.43	$0.00
Trailer, Pequea (TR-836)	53002		$12.17		$2.43	$0.00
Trailer, Utility PJ (TR-464)	53002		$12.17		$2.43	$0.00
Trailer, Const. Office (TR-???)	53007		$7.37		N/A	$0.00
Trimmers, Weed	N/A		$14.25		$1.90	$0.00
Truck, 2-Ton Dump (ES114)	55010		$44.23		$2.69	$0.00
Truck, 5-Ton Dump (ES115)	55011		$11.62		$5.96	$0.00
Truck, 10-Wheel Dump (ES-110)	55012	20.00	$50.52	120.00	$7.61	$1,923.60
Welder/Generator	11001	10.00	$11.95	60.00	$2.22	$252.70
Wood Chipper 16T-300 (TR-551)	N/A		$75.75		$10.10	$0.00
Wood Chipper (ES-133)	N/A		$75.75		$10.10	$0.00
Wood Chipper 6" (TR-755)	N/A		$44.25		$5.90	$0.00

Equipment Item	Class	No. of Days	Daily Rate	No. of Miles	Cost/Mile $	Total$$
1 Ton Crew Cab (ES113) Bill	55009	20.00	$33.75	1,200.00	$0.15	$855.00
1 Ton Crew Cab (ES117) Bat Truck	55009		$33.75		$0.15	$0.00
1 Ton Crew Cab (ES152) Jim	55009		$33.75		$0.15	$0.00
1 Ton Dump Truck (ES 153)	55009		$33.75		$0.15	$0.00
3/4 Ton PU Truck (ES 42) Chris	55015	20.00	$28.75	1,200.00	$0.10	$595.00
3/4 Ton PU Truck (ES 44)	55015		$23.75		$0.10	$0.00
3/4 Ton PU Truck (ES121) Old	55015		$23.75		$0.10	$0.00
3/4 Ton PU Truck (ES151)	55015		$23.75		$0.10	$0.00
3/4 Ton PU Truck (ES165)	55015		$23.75		$0.10	$0.00
1/2 Ton Plow Truck (ES122)	55008		$19.33		$0.08	$0.00

PAGE TOTAL: $4,651.36

Signature: James W. Gallagher, Jr., P.E., Chief Water Resources Eng *Date*

CITY OF MANCHESTER
Parks, Recreation & Cemetery Department

625 Mammoth Road
Manchester, NH 03104-5491
(603) 624-6565 Administrative Office
(603) 624-6514 Cemetery Division
(603) 624-6569 Fax

IN BOARD OF MAYOR & ALDERMEN

DATE: July 11, 2006

ON MOTION OF ALD. Garrity

SECONDED BY ALD. Lopez

VOTED TO refer to Committee on CIP.

CITY CLERK

June 6, 2006

The Honorable Board of Mayor and Alderman
City Hall
908 Elm Street
Manchester, NH 03101

Re: Black Brook Dam

Dear Members of the Board:

Black Brook Dam has been the subject of several letters of deficiency from the State of New Hampshire Department of Environmental Services Water Division Dam Bureau. Since Black Brook is very old, certain items have been identified by the NHDES that need repair. Following the letters of deficiency, the Board of Mayor & Alderman's Committee on Lands & Buildings has discussed the two options for addressing the dam.

The first option is to repair the dam as described in the letters of deficiency. The engineering firm of Dubois & King was hired several years ago to evaluate the dam and provide a construction estimate to complete the necessary repairs. Their estimate to repair identified deficiencies was submitted to our office in 2003 in the amount of $60,000. Due to inflation and general increased construction costs we anticipate these repairs will cost approximately $85,000.

The second option is to remove the dam entirely and restore the original stream channel. This NHDES has reviewed the feasibility of eliminating the Dam and restoring the brook to it's original form and has determined that there are benefits that the City should consider including costs for annual maintenance, safety and environmental improvements.

Should the City decide that the appropriate action is removal of the dam, this dept will be working with The State in a partnership to coordinate the project. Removal of the dam would be funded 60% from the State and the remaining 40% could be in-kind services from the City resulting in a greatly reduced net cost to the City.

Since neither action has been taken the NHDES, has issued an Executive Order (see attached) to the City. This order mandates the completion of either action by the city according to the schedule as outlined in the Executive Order. Since no funding has been recommended in the FY-07 budget this department respectfully seeks the guidance of the Board in this matter.

Best Regards,

Chuck DePrima, Deputy Director

Cc: Ronald E. Ludwig, Director
Sean Thomas, Mayors Office
Robert S. MacKenzie, Planning Director
Sam Maranto, CIP

RECEIVED
JUN 8 2006
CITY CLERK'S OFFICE

The State of New Hampshire

Department of Environmental Services

Michael P. Nolin
Commissioner

City of Manchester
Attn: Parks & Recreation Department
625 Mammoth Road
Manchester, NH 03104

Re: Black Brook Dam
Dam #150.07

ADMINISTRATIVE ORDER
NO. WD 06-015

May 25, 2006

A. INTRODUCTION

This Administrative Order is issued by the Department of Environmental Services, Water Division to the City of Manchester, pursuant to RSA 482:12 and RSA 482:87. This order is effective immediately upon issuance.

B. PARTIES

1. The Department of Environmental Services, Water Division ("DES"), is a duly-constituted administrative agency of the State of New Hampshire, having its principal office at 29 Hazen Drive, Concord, New Hampshire.

2. The City of Manchester is a duly-constituted municipality of the State of New Hampshire having a mailing address of 625 Mammoth Road, Manchester, NH 03104.

C. STATEMENTS OF FACTS AND LAW

1. Pursuant to RSA 482, DES regulates the construction and maintenance of dams so as to meet the stated statutory objectives, including the regulation of water levels, the lessening of flood damage, and the enhancement of public safety. Pursuant to RSA 482:87, the Commissioner of DES has adopted NH Admin. Rules Env-Wr 100-700 to implement this program.

2. According to DES records, the City of Manchester (the "City") owns the dam in Manchester, New Hampshire known as the Black Brook Dam, further identified as Dam #150.07 (the "Dam"). The Dam is located approximately 40 feet upstream of the secondary state highway, NH Route 3A, in Manchester, New Hampshire.

3. RSA 482:12 requires DES to periodically inspect all dams in the state which may pose a menace to public safety, and to take action to ensure that the dam is repaired if the inspection indicates that the public safety so requires.

4. RSA 482:2, V, defines a "dam in disrepair" as a dam which is a menace to public safety and is incapable of safely impounding flood waters to its crest, or is incapable of maintaining a reasonably constant level of waters impounded or which does not contain adequate gates and sluiceways to provide for the holding or controlled discharge of waters impounded.

5. RSA 482:11-a requires the owner of a dam to maintain and repair the dam so that it does not become a "dam in disrepair."

6. Env-Wr 101.25 defines "menace to public safety" as any dam, the failure of which would threaten life or property. Property, when used in this context, means buildings, structures or other real estate.

7. Env-Wr 101.08 defines "Class B Structure" as a dam with a significant hazard potential the failure of which would result in structural damage to a secondary state highway.

8. The Dam has been classified as a Class B Structure by DES because its failure would overtop a portion of a secondary state highway, Route 3A, and could cause damage to the bridge, which is approximately 40 feet downstream of the dam. There also exists the possibility of minor flooding to the area adjacent to the brook just downstream of the bridge.

9. On November 14, 2001, an inspection of the Dam was conducted in accordance with RSA 482:12 and Env-Wr 302.02 and the following deficiencies were noted by DES staff:

- The upstream face of the waste gate bar rack was clogged with debris;
- The concrete is spalling on the upstream face of the right abutment, toward the waste gate. In addition, there is a significant amount of efflorescence on this abutment; and
- There is seepage at the base of the right masonry spillway abutment wall. The seepage discharge appears to have increased to an estimated 5 gpm since the Dam was last evaluated in 1997. At the time of the 1997 inspection, the water level was approximately 6" lower than it was during the 2001 inspection.
- The operation and maintenance plan is in need of updating.
- The emergency action plan needs to be updated and tested.

10. On September 13, 2002, DES sent a Letter of Deficiency (the "LOD") to the City requesting that the deficiencies in C.9 above be corrected by December 31, 2002.

11. On October 10, 2002 the City responded to the LOD with a request to extend the deadline for repairs until 7/31/03.

12. On December 3, 2002 the City received an engineering estimate from a consulting firm for repair of the right concrete retaining wall. No schedule was proposed for the work.

13. On September 22, 2003 a follow-up inspection was conducted by DES. A sinkhole, approximately 1.5 feet wide by 3.5 feet deep, on the right downstream embankment adjacent to

the concrete abutment wall was noted. The City was notified of the inspection results. The follow-up inspection also revealed that work requested in the 9/13/02 LOD had not been addressed.

14. On July 29, 2004 and November 16, 2004 follow-up inspections were conducted by DES. The requested repair work noted in the 9/13/02 LOD and repair of the sinkhole had not been performed.

15. On June 22, 2005 DES conducted an inspection of the Dam with Mr. Chuck DePrima from the Manchester Parks and Recreation Department. The inspection resulted in the following deficiencies being noted by DES staff:

- A sinkhole, approximately 1.5 feet wide by 3.5 feet deep, on the right downstream embankment adjacent to the concrete abutment wall has been present since the fall of 2003. Below this sinkhole a seep has been discharging from the downstream right spillway training wall and noted in past inspections since 1985.

- The concrete on the right upstream retaining wall is cracked and spalling along most of its length.

- The operation and maintenance plan, dated 2002, needs updating.

- The Dam cannot pass the 100-year design storm event with one foot of freeboard and no operations.

- The annual review of the EAP is due.

15. On December 21, 2005 DES issued a letter to the City stating that an administrative order would be issued unless DES was contacted by the City regarding repair or removal of the dam. To date DES does not have a record of any response from the City to this letter.

16. The Dam is in disrepair as defined in RSA 482:2 V.

17. The Dam is a menace to public safety in its current state of disrepair, as a failure of the Dam would damage the downstream secondary state highway, NH Route 3A, in Manchester, New Hampshire.

D. Determination of Violations

1. The City of Manchester has violated RSA 482:11-a by failing to maintain the Dam to prevent it from becoming a "dam in disrepair".

E. Order

Based on the above findings, DES hereby orders the City of Manchester as follows:

By July 30, 2006

1. Provide evidence to DES that the City has hired a qualified engineering firm to conduct a comprehensive structural evaluation of the dam. The evaluation must include, at a minimum, (a) an investigation into the leakage on the right downstream abutment wall where a sinkhole has developed above the seep on the right downstream embankment; and (b) an investigation into the inadequacy of the dam to pass the design storm event with one foot of freeboard and no operations (Env-Wr 303.11-a-2), which should be based on a detailed hydrologic analysis of the watershed.

2. Stabilize the sinkhole in the right downstream embankment such that it does not worsen during the evaluation period.

3. Update the operation and maintenance plan. Include a monitoring schedule in the Operation and Maintenance Plan. Carefully monitor the seepage at the base of the right masonry spillway abutment wall and notify the DES if there is any increase. Record the seepage discharge rate and corresponding pond level.

4. Repair the spalling concrete on the right upstream retaining wall.

5. Review the Emergency Action Plan ("EAP") as required annually. Provide DES with any revisions or notify DES that the EAP is current.

By December 31, 2006

6. Conduct a deep drawdown in the presence of a licensed and qualified engineer in order to conduct a detailed inspection of the Dam in the vicinity of the right abutment. This work is recommended, in part, to further investigate the leakage on the right downstream abutment wall and sinkhole that has developed above the seep on the right downstream embankment.

7. Provide an engineering assessment and recommendations to address items outlined in items E.1 and E.6, as well as all other deficiencies in need of attention.

8. Obtain all necessary permits (e.g. DES Wetlands Bureau and Dam Bureau permits) for the reconstruction of the Dam.

By December 31, 2007

9. Complete reconstruction of the Dam as recommended by the engineering investigation.

If the City elects to remove the Dam, then the City must address Item E.10 through E.12, below:

10. **By July 30, 2006** notify DES of decision by the City to remove the dam.

11. **By December 31, 2007,** submit design plans, specifications and any required DES permit applications for the removal of the Dam.

12. **By December 31, 2008,** remove the Dam in accordance with the approved plans, specifications, and permit conditions.

Send correspondence, data, reports, and other submissions made in connection with this Administrative Order, **other than appeals**, to DES as follows:

Grace Levergood, P.E., Dam Safety Engineer, Dam Bureau
DES Water Division
P.O. Box 95
Concord, NH 03302-0095
Phone: (603) 271-1971
Fax: (603) 271-7894
E-mail: glevergood@des.state.nh.us

F. Appeal

Any person aggrieved by this Order may appeal the Order to the Water Council by filing an appeal that meets the requirements specified in Env-Wc 200 within 30 days of the date of this Order. Copies of the rule are available from the DES Public Information Center at (603) 271-2975 or at http://www.des.state.nh.us/desadmin.htm. Appealing the Order does not automatically relieve the City of the obligation to comply with the Order.

G. Other Provisions

Please note that RSA 482:89 provides for administrative fines and criminal penalties for the violations noted in this Order. DES will continue to monitor the City's compliance with applicable requirements and will take appropriate action if additional violations are discovered.

This Order is being recorded in the Hillsborough County Registry of Deeds so as to run with the land.

Harry T. Stewart, P.E., Director
Water Division

Michael P. Nolin, Commissioner
Department of Environmental Services

Certified Mail/RRR: 7000 1670 0000 0588 6660
cc: Gretchen Hamel, DES Legal Unit Administrator
Public Information Officer, DES PIP Office
NH AGO

GEL/h:/safety/wendy/ao/15007AOgel.doc